



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,061	02/20/2007	Peisheng Cao	14556.0007USWO	7583
23552 7590 05/17/2010 MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903				
EXAMINER				
LEITH, PATRICIA A				
ART UNIT		PAPER NUMBER		
1655				
MAIL DATE		DELIVERY MODE		
05/17/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/580,061

Applicant(s)

CAO, PEISHENG

Examiner

Patricia Leith

Art Unit

1655

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4, 6, 7 and 27-38 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/220)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

The finality of the previous Office action is hereby REMOVED.

Claims 1-4, 6-19, 27-38 are pending in this application for US patent. Claims 8-19 remain withdrawn from examination on the merits as being directed toward a non-elected invention.

The Declaration filed under 37 CFR 1.132 by Zhen-Gang Zhu provides sufficient evidence that 'non-linear vibration' would be understood by those of ordinary skill in the art to mean the application of multiple frequencies and not a trace amount of non-linear vibration as would occur as an intrinsic consequence of applying any one frequency (see (6)-(8) of the Declaration in particular).

Considering the Declaration, the claims were reevaluated with regard to the cited prior art documents. It is determined that the claimed invention is novel and unobvious because there is no one machine/apparatus of which the Examiner is aware which will carry out the simultaneous conditions of nonlinear vibration, the high pressure and specific temperature range as required by the claims. Although the use of ultrasonic vibration was known to extract plant material (GB 2004197A), there is no machine/apparatus which the Examiner is aware of which could be obviously modified

taking specific suggestions in the prior art to carry-out the simultaneous conditions of the claims.

This application is in condition for allowance except for the presence of claims 8-19 directed to an Invention non-elected without traverse (as well as the formal matter detailed below). Accordingly, claims 8-19 have been cancelled.

Specification

The Specification as amended on 7/21/2008 is objected to because it was not accompanied by a clean version of the amended Specification and Applicant did not state that the Specification does not contain New Matter as required by 37 CFR 1.125(a) :

A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive

characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. **An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied.** Numbering the paragraphs of the specification of record is not considered a change that must be shown.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney Wu on 5/4/2010.

IN THE CLAIMS:

Claim 1: replace 'An extraction method' with – A method for preparing a plant extract--.

Claims 2-4 and 6-7: replace 'An extraction' with – The --.

Claim 3, line 2: after 'plant' delete the word 'product.'

Claim 6, line 2: replace 'the step' with – a step--.

Replace Claims 27-38 with:

27. The method of claim 1, wherein the step of extraction is carried out in an extraction apparatus, wherein said extraction apparatus comprises: an extracting can comprising a can body and a top lid, a sealing structure to seal the can body and the top lid, a water-supply system and a pipeline connection to input water into the can body from the water-supply system and to output extraction fluid; said apparatus further comprising a high pressure pump, which is connected to the extracting can to maintain the pressure in the extracting can at 25-35 MPa; said apparatus further comprising a raw material can and a nonlinear vibration apparatus to emit nonlinear vibration with a frequency in the range of 18 KHz-33 KHz, wherein the raw material can and nonlinear vibration apparatus are set inside the extracting can; wherein said top lid is equipped with both a connecting hole to pass therethrough a conductive line for connecting said nonlinear vibration apparatus to an external electrical source and a vent hole connected to a seal valve; said apparatus further comprising a material pump connected to the extracting can to output the extraction fluid.

28. The method of claim 27, wherein said nonlinear vibration apparatus comprises a plurality of vibration apparatus emitting nonlinear vibration, with the axes of each adjacent nonlinear vibration apparatus perpendicular in different surfaces with each other, wherein said nonlinear vibration apparatus has two proximate ends with an

outputting curve surface and a vibrating slice set between the two proximate ends, and an insulation layer set outside of the vibrating slice, and a conducting line connecting the vibrating slice with the external electrical source.

29. The method of claim 27, wherein said raw material can is a cylindrical bracket enwrapped with a filter cloth bag, and the apparatus further comprises a hook set in the center of the bracket top to hang the nonlinear vibration apparatus.

30. The method of claim 27, wherein said sealing structure is a collar and a seal washer between the can body and the top lid, wherein said can body is also comprises an external circulating pump to circulate fluid in the extracting can.

31. The method of claim 27, wherein the extracting can is further equipped with an external temperature-controlling apparatus capable of maintaining the temperature in the range of 20°C-50°C.

32. The method of claim 31, wherein said temperature- controlling apparatus comprises a heating-and-warming layer.

33. The method of claim 27, wherein said water-supply system has a water-processing machine and a water pump to input fluid into the extracting can.

34. The method of claim 30, wherein said circulating pump is a magnetic circulating pump.

35. The method of claim 27, wherein the sealing valve is further connected to an air compressor.

36. The method of claim 27, wherein said apparatus further comprises a concentrating system connected to the material fluid can.

37. The method of claim 36, wherein said concentrating system comprises a supersonic atomization apparatus comprising an air-filtrating machine set on the top of said concentrating system, an atomization room, a gas-gathering room and gas-outputting fan set under the atomization room, wherein there is a plurality of supersonic generators set in the atomization room, and a fluid-inputting hole inputting the extraction fluid and fluid-outputting hole outputting the concentrated extraction fluid set on the side wall of the atomization room.

38. The method of claim 1, wherein the plant is Angelica.

IN THE ABSTRACT:

Replace all "~" with -- -- (in otherwords, replace the ~ with – (hyphens)–.

IN THE TITLE:

Replace the title of the invention with:

--Plant Extraction Using Nonlinear Vibration--

IN THE SPECIFICATION:

Please amend from the most recent version of the Specification filed on 7/21/2008:

Page 5, line 6, replace 'Eextracting' with -- Extracting--.

Page 5, line 28, replace 'injectionable' with -- injectable--.

Page 7, line 26, replace 'numerous' with -- a plurality--.

Page 15, line 23, replace 'several' with -- different--.

Page 17, line 21, replace -- Inhale' with --Take -- and delete the word 'finely.'

Page 18, line 2, add a period --.---to the end of the sentence.

Page 18, line 5, replace 'Stand and thaw' with – Allow to come --.

Page 18, line 7, replace 'Inhale' with – Take--.

Page 18, line 12, add a period --.---to the end of the sentence.

Page 20, line 2, replace 'inhale 1ml finely. Add' with – take 1ml and add --.

Page 20, line 9, after 'water-soluble substances,' insert -- but also extracts --.

Claims 1-4, 6, 7 and 27-38 are allowed.

This application is in condition for allowance except for the following formal matters as provided under the 'Specification' heading above.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 25 USPQ 74, 453 O.G. 213, (Comm'r Pat. 1935).

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia Leith whose telephone number is (571) 272-0968. The examiner can normally be reached on Monday - Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terry McKelvey can be reached on (571) 272-0775. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Patricia Leith
Primary Examiner
Art Unit 1655

/Patricia Leith/
Primary Examiner, Art Unit 1655
May 4, 2010

